## CLAIMS

We claim:

1. A system for viewing the inside of a cavity using a variable direction of view endoscope, wherein a view vector is located at a distal end of said endoscope, comprising:

an input device that receives commands from a user;

a tracking device that provides view vector orientation information;

a processing device that receives said commands and said orientation information and performs operations comprising the calculation of desired endoscope adjustment rates based on said commands and said orientation information, wherein said commands are interpreted by said processing device with respect to a control coordinate system that can change in alignment with said endoscope;

a control device that adjusts said endoscope according to said adjustment rates; and

a display device that displays a current endoscopic view.

2. The system according to claim 1, wherein said control coordinate system adjusts in correspondence with said current endoscopic view, remaining stationary relative thereto.

3. The system according to claim 1, wherein said control coordinate system is aligned with a natural coordinate system of said endoscope.

4. The system according to claim 1, wherein said control coordinate system is aligned to a user specified orientation.

5. The system according to claim 1, wherein said control coordinate system is aligned with gravity.

6. The system according to claim 1, wherein one or more coordinate systems are displayed on said display device, superimposed on said current endoscopic view.

7. The system according to claim 1, further comprising a depiction of said endoscope.

8. The system according to claim 1, further comprising a depiction of said view vector.

9. The system according to claim 1, further comprising a depiction of one or more coordinate systems.

10. The system according to claim 1, further comprising a depiction of one or more features corresponding to the surroundings of the endoscope.

11. The system according to claim 1, wherein said processing device stores one or more endoscope configurations in a memory thereof.

12. The system according to claim 11, further comprising a display of one or more endoscopic images, each relating to a stored endoscope configuration.

13. A system for viewing the inside of a cavity using a variable direction of view endoscope, wherein a view vector is located at a distal end of said endoscope, comprising:

an input device that receives commands from a user;

a tracking device that provides view vector orientation information;

a processing device that receives said commands and said orientation information and performs operations comprising the calculation of a desired endoscope adjustment rates based on said commands and said orientation information, wherein said commands are interpreted by said processing device with respect to a control coordinate system that can change in alignment with said endoscope, and wherein said endoscope adjusts at said adjustment rates; and

a viewing device that provides a current endoscopic view.

14. A system for viewing the inside of a cavity using a variable direction of view endoscope, wherein a view vector is located at a distal end of said endoscope, comprising:

an input means for receiving commands from a user;

a tracking means for providing view vector orientation information;

a processing means for receiving said commands and said orientation information and for performing operations, comprising the calculation of desired endoscope adjustment rates based on said commands and said orientation information, wherein said commands are interpreted by said processing device with respect to a control coordinate system that can change in alignment with said endoscope;

an adjusting means for adjusting said endoscope according to said adjustment rates; and

a viewing means for providing a current endoscopic view.